

ABSTRACT OF THE DISCLOSURE

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A technique, associated system and computer executable program code, for projecting a superimposed image onto a target display surface under observation of one or more cameras. A projective relationship between each projector being used and the target display surface is determined using a suitable calibration technique. A component image for each projector is then estimated using the information from the calibration, and represented in the frequency domain. Each component image is estimated by: Using the projective relationship, determine a set of sub-sampled, regionally shifted images, represented in the frequency domain; each component image is then composed of a respective set of the sub-sampled, regionally shifted images. In an optimization step, the difference between a sum of the component images and a frequency domain representation of a target image is minimized to produce a second, or subsequent, component image for each projector. Here, a second set of frequency domain coefficients for use in producing a frequency domain representation of the second component image for each projector is identified. Taking the inverse Fourier transform of the frequency domain representation of the second component image, converts the information into a spatial signal that is placed into the framebuffer of each component projector and projected therefrom to produce the superimposed image.